

REMARKS

This Amendment is filed in response to the Office Action dated May 10, 2004. A petition for a one-month extension of time to respond and a Notice of Appeal were filed September 10, 2004. In order to avoid an appeal or further prosecution, the present Amendment is filed which addresses and is believed to overcome the pending rejections.

In the Action, the Examiner has maintained his previous rejections and rejected claims 1-20, 22, and 24-29 under 35 U.S.C. § 112, second paragraph, as being indefinite for reciting "cushioning." The Examiner has also rejected 1) claims 1, 12-13, 16-20, and 22 under 35 U.S.C. § 102(b) as being anticipated by Davy; 2) claims 2-6, 9-11, 14-15, and 24-29 under 35 U.S.C. § 103(a) as being obvious over Davy; 3) claims 7-8 under 35 USC § 103(a) as being obvious over Davy in view of Bonerb.

With respect to the § 112 rejection, claim 1 has been amended to specify that the tube has a predetermined cross sectional shape and area. This amendment is supported on page 4, lines 3-4 and the drawings of the present application.

It is important to the method of the present invention that the tube which is used should have a predetermined cross sectional shape and size during processing, so that control of the volume of pouches formed from the tube can be obtained.

It is noted that there are a number of ways in which the cross sectional shape of the tube can be controlled. For example, it may be constrained by structures (not shown) surrounding the tube while it is being filled.

Alternatively, the inventor has found that the provision of pleats at the ends as claimed in claim 8 is advantageous in providing predetermined cross sectional shape to the tube and the pouches formed therefrom.

It is further recited at the end of claim 1 that the pouch has at least one long side face which is as long as or longer than all other faces of the pouch and that , if a sealed pouch is placed on its long side face, a layer of air is formed above the foodstuff. This defines how the cushioning is achieved. This is supported by page 2, next to last line of the application as filed, which specified the presence of a layer of air. It is clear from the general description and the figures (for example Figures 4, 5, 6, 7) that the cushioning effect is required when pouches are placed on their side and according to page 2, last lines, this is obtained by a layer of air which is formed within each pouch. This is now claimed in claim 1. Further, it is now clear that this predetermined amount of air is included as an inevitable result of the fact that the tube has a predetermined cross sectional shape and area and is sealed at a predetermined distance from the first seal so that the pouches have a predetermined volume. Further, a predetermined amount of foodstuff is placed in each pouch which is less than the predetermined volume so that a predetermined amount of additional air is included as well. There is no extra step to include the air.

It is submitted that claim 1, as amended, overcomes the § 112 rejection. Positive steps are clearly defined in the claim 1. It is now clear that the predetermined amount of air is trapped during the process of packaging and is thus an inherent part of the process as a result of the design parameters under which the process is carried out. However, the amendment to overcome the § 112 rejection is clarifying in nature and is not intended to be, nor believed to be, a narrowing amendment. Reconsideration and withdrawal of the § 112 rejection are respectfully requested.

The Applicant respectfully traverses the § 102 and § 103 rejections based in whole or in part on Davy. Claim 1 as amended is clearly novel in view of Davy. Davy does not disclose the step of forming a tube having a predetermined cross sectional shape and area.

The tube is allowed to bulge out to any shape which is determined by the product in the tube pushing the walls out. Accordingly, the shape of the tube is not constrained to any particular shape. Its volume is not constrained to any particular predetermined amount. It is determined to some extent randomly by the fill pattern created by the product placed in each pouch.

Although the amount of material placed in each pouch is predetermined, the volume and shape of each pouch is not predetermined. It also appears from figure 4 that the deformation of the pouch walls during the sealing step created by the head 19-90 tends to expel any excess air so that a tightly packaged material as shown in pouch 8 is produced.

There is no disclosure that, if the sealed pouches of Davy are placed on their long sides, a layer of air is formed above the foodstuff. That is, there is no cushioning step. This is not illustrated in any figure of Davy nor is it deducible from any part of the description of Davy. It is not inevitable in the operation of Davy.

As a consequence, Applicant asserts that claim 1 and all dependent claims are novel and unobvious in view of Davy.

There is no disclosure at all in Davy of the cushioning effect achieved by predetermining the shape, size and volume of each pouch and then matching it with the amount of foodstuff placed in the pouch so that a layer of air is formed above the foodstuff when the pouch is placed on its side thereby protecting the foodstuff. One skilled in the art would not be able to deduce this method from any of the cited prior art.

Further, dependent claims 10, 11, 24, 25, 26 and 28 define additional inventive features.

A particular advantage is obtained if each pouch is cubic or cuboidal in shape. In this case, each pouch defines flat surfaces which, when folded, will rest against faces of adjacent

pouches, so that each pouch can support adjacent pouches. This means that each pouch can be strongly supported on each side, thereby additionally preventing damage to contents of each pouch.

The space filling pattern defined in claim 24 is beneficial because, when the pouches are folded, they leave substantially no space between them. If substantial spaces were left between pouches, the pouches could move into those spaces during transport, thereby disrupting and disturbing the contents of each pouch. By forming a space filling pattern, this disruption and disturbance is avoided.

It is particularly advantageous if the carton holds the pouches in the space filling pattern (claim 25). In this way, pouch shape, pouch arrangement and carton walls all work together to hold each pouch in an exactly fixed position during transport. This again, allows the pouches to be held so that they do not move in transport, thereby protecting the contents. Further, because of the cushioning layer of air present in each pouch, the foodstuff in each pouch is maintained so that it is not acted upon by any compressive forces from adjacent pouches. These compressive forces are resisted by the cushioning layer of air.

The method of claim 26 is particularly advantageous. Whereas Davy shows the pouches being assembled into a rough configuration inside a carton one by one during assembly, claim 26 requires that the pattern of pouches is first of all formed in free space, which is particularly easy to automate. This pattern is then inserted into a carton, with the pattern complete. This means that the assembly of the pattern takes place where it is not constrained by the walls of the carton. As soon as it is complete, the pattern can be inserted into a carton where it is held safely. Thus, the procedure of assembling the pattern is simplified.

It is noted that the Examiner did not raise any arguments to claims 28 and 29, although they were rejected under 35 USC § 103.

Nonetheless, the particular combination of claim 29 has many advantages. In addition to the advantages mentioned above, there is a synergism between the features claimed.

In particular, by providing pouches which are substantially cuboidal in shape, the pouches can be arranged so that there is very little wasted space between the pouches. It is also inevitable that walls which appear on the outside of the folded pattern will be parallel to and easily insertable into the carton. When inserted into the carton, the walls of the carton touch the side walls of the pouches on the outside of the pattern and support them with no wasted space. By controlling the size of the carton so that the walls of the carton hold the pouches in the space filling pattern, very efficient support can be obtained and the amount of wasted space in the container is minimised.

None of the advantages disclosed above are disclosed or suggested in the prior art and accordingly they are inventive in view of the prior art.

The § 103 rejection of claims 7 and 8 as unpatentable in view of Davy and Bonerb is respectfully traversed. Although Bonerb teaches the formation of pleats in bags to make the bags expandable, it does not teach to form pleats in the bag to provide pouches which are of predetermined size and volume so that a predetermined amount of air can be included. It is noted that the shape of the liner in Bonerb is in fact defined by the external body.

Applicant respectfully disagrees with the Examiner's Response to Arguments. As noted above, Davy does not disclose forming pouches of predetermined shape and volume. It is respectfully noted that the volume of the foodstuff is not less than the volume of the bag in Davy. This is not disclosed anywhere. It is certainly not the case that a predetermined amount of air will be included so that a layer of air is formed above the material when it is

placed on its side. It is noted that Davy explicitly discloses that the product displaces and bulges out the sides a-b of the bag so it must be in contact with the sides of the bag and no layer of air can be formed above the product (see col. 2 lines 50-54).

With respect to the combination of the references, the Examiner notes that, a pleat may be included in the bag to make it expandable and therefore flexible. It is submitted that, on its own, this would actually make the contents more liable to crushing rather than less. That is, because the shape of the bags is thereby more flexible, the goods are less protected. Protection in the present invention is provided by the careful control of volume and shape of the bags so that a predetermined amount of air is trapped inside and this is not disclosed or suggested in any of the prior art.

New dependent claims 30 and 31 are presented to round out the claim coverage. New claim 30 claims the method applied to breakfast cereals. One skilled in the art of breakfast cereal is aware of two forms of packaging, as referred to in the introduction to the present application. In particular, the cereal may be either contained in individual small serving size pouches which are each packed in their own individual carton or it may be contained in large cartons containing a multiple of servings. This is the state of the art packaging art. This defines the knowledge and approach of those skilled in this art. There has never been any suggestion before the present invention was made of taking a plurality of packets of breakfast cereal in a strip, folding them into a pattern while still connected and placing the pattern in a carton. This lies completely outside the skill and expectation of the person skilled in this art and is accordingly inventive.

New claim 31 includes the specific designs steps whereby the volume and shape of the bag and the quantity of foodstuff are predetermined. Again, this is not disclosed anywhere in the prior art.

For the reasons stated, reconsideration and withdrawal of the § 102 and § 103 rejections are respectfully requested.

As all grounds of rejection have been addressed and overcome, entry of this Amendment and issuance of a Notice of Allowance of all pending claims, as now presented, are respectfully solicited.

In the event that there are any questions relating to this Amendment or to the application in general, it would be appreciated if the examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage of fees or credit any overpayment thereof to BLANK ROME LLP, Deposit Account No. 23-2185 (000026-00032). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, Applicant hereby petitions under 37 C.F.R. 1.136(a) for an extension of time for as many months as are required to render this submission timely.

Any fees due are authorized above.

Respectfully submitted,

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